

# **HIKOKI**

## **Cordless Impact Driver Model WH 10DL (X)**

### **Handling instructions**



**NOTE:**

Before using this Power Tool, carefully read through these HANDLING INSTRUCTIONS to ensure efficient, safe operation. It is recommended that these INSTRUCTIONS be kept readily available as an important reference when using this power tool.

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## GENERAL SAFETY RULES

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### WARNING!

#### Read all instructions

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

### SAVE THESE INSTRUCTIONS

#### 1) Work area safety

- a) **Keep work area clean and well lit.**  
*Cluttered or dark areas invite accidents.*
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.**  
*Power tools create sparks which may ignite the dust or fumes.*
- c) **Keep children and bystanders away while operating a power tool.**  
*Distractions can cause you to lose control.*

#### 2) Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.**  
*Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.**  
*There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not expose power tools to rain or wet conditions.**  
*Water entering a power tool will increase the risk of electric shock.*
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.**  
*Damaged or entangled cords increase the risk of electric shock.*
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.**  
*Use of a cord suitable for outdoor use reduces the risk of electric shock.*

#### 3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.**  
*A moment of inattention while operating power tools may result in serious personal injury.*
- b) **Use personal protective equipment. Always wear eye protection.**  
*Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.**

*Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.*

- d) **Remove any adjusting key or wrench before turning the power tool on.**  
*A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
  - e) **Do not overreach. Keep proper footing and balance at all times.**  
*This enables better control of the power tool in unexpected situations.*
  - f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.**  
*Loose clothes, jewellery or long hair can be caught in moving parts.*
  - g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.**  
*Use of dust collection can reduce dust related hazards.*
- #### 4) Power tool use and care
- a) **Do not force the power tool. Use the correct power tool for your application.**  
*The correct power tool will do the job better and safer at the rate for which it was designed.*
  - b) **Do not use the power tool if the switch does not turn it on and off.**  
*Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
  - c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.**  
*Such preventive safety measures reduce the risk of starting the power tool accidentally.*
  - d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.**  
*Power tools are dangerous in the hands of untrained users.*
  - e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools' operation. If damaged, have the power tool repaired before use.**  
*Many accidents are caused by poorly maintained power tools.*
  - f) **Keep cutting tools sharp and clean.**  
*Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
  - g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.**  
*Use of the power tool for operations different from those intended could result in a hazardous situation.*
- #### 5) Battery tool use and care
- a) **Ensure the switch is in the off position before inserting battery pack.**  
*Inserting the battery pack into power tools that have the switch on invites accidents.*

**b) Recharge only with the charger specified by the manufacturer.**

*A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.*

**c) Use power tools only with specifically designated battery packs.**

*Use of any other battery packs may create a risk of injury and fire.*

**d) When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.**

*Shorting the battery terminals together may cause burns or a fire.*

**e) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.**

*Liquid ejected from the battery may cause irritation or burns.*

**6) Service**

**a) Have your power tool serviced by a qualified repair person using only identical replacement parts.**

*This will ensure that the safety of the power tool is maintained.*

**PRECAUTION**

**Keep children and infirm persons away.**

**When not in use, tools should be stored out of reach of children and infirm persons.**

**PRECAUTIONS FOR CORDLESS IMPACT DRIVER**

1. This is portable tool for tightening and loosening screws. Use it only for these operations.
2. Use the earplugs if using for a long time.
3. One-hand operation is extremely dangerous; hold the unit firmly with both hands when operating.
4. After installing the driver bit, pull lightly out the bit to make sure that it does not come loose. If the bit is not installed properly, it can come loose during use, which can be dangerous.
5. Use the bit that matches the screw.
6. Tightening a screw with the impact driver at an angle to that screw can damage the head of the screw and the proper force will not be transmitted to the screw. Tighten with this impact driver lined up straight with the screw.
7. Always charge the battery at a temperature of 0 – 40°C. Charging the battery at temperatures outside the range of 0 – 40°C may prevent proper charging and reduce battery life.  
The most suitable temperature for charging is that of 20 – 25°C.
8. When one charging is completed, leave the charger for about 15 minutes before the next charging of battery.
9. Do not allow foreign matter to enter the hole for connecting the rechargeable battery.
10. Never disassemble the rechargeable battery and charger.
11. Never short-circuit the rechargeable battery. Short-circuiting the battery will cause a great electric current and overheat. It results in burn or damage to the battery.

12. Do not dispose of the battery in fire.  
If the battery is burnt, it may explode.
13. When drilling in wall, floor or ceiling, check for buried electric power cord, etc.
14. Bring the battery to the shop from which it was purchased as soon as the post-charging battery life becomes too short for practical use. Do not dispose of the exhausted battery.
15. Using an exhausted battery will damage the charger.
16. Do not insert object into the air ventilation slots of the charger.  
Inserting metal objects or inflammables into the charger air ventilation slots will result in electrical shock hazard or damaged charger.

**CAUTION ON LITHIUM-ION BATTERY**

To extend the lifetime, the lithium-ion battery equips with the protection function to stop the output.

In the cases of 1 to 3 described below, when using this product, even if you are pulling the switch, the motor may stop. This is not the trouble but the result of protection function.

1. When the battery power remaining runs out, the motor stops.  
In such case, charge it up immediately.
2. If the tool is overloaded, the motor may stop. In this case, release the switch of tool and eliminate causes of overloading. After that, you can use it again.
3. If the battery is overheated under overload work, the battery power may stop.  
In this case, stop using the battery and let the battery cool. After that, you can use it again.

Furthermore, please heed the following warning and caution.

**WARNING**

In order to prevent any battery leakage, heat generation, smoke emission, explosion and ignition beforehand, please be sure to heed the following precautions.

1. Make sure that swarf and dust do not collect on the battery.  
 During work make sure that swarf and dust do not fall on the battery.  
 Make sure that any swarf and dust falling on the power tool during work do not collect on the battery.  
 Do not store an unused battery in a location exposed to swarf and dust.  
 Before storing a battery, remove any swarf and dust that may adhere to it and do not store it together with metal parts (screws, nails, etc.).
2. Do not pierce battery with a sharp object such as a nail, strike with a hammer, step on, throw or subject the battery to severe physical shock.
3. Do not use an apparently damaged or deformed battery.
4. Do not use the battery in reverse polarity.
5. Do not connect directly to an electrical outlets or car cigarette lighter sockets.
6. Do not use the battery for a purpose other than those specified.
7. If the battery charging fails to complete even when a specified recharging time has elapsed, immediately stop further recharging.
8. Do not put or subject the battery to high temperatures or high pressure such as into a microwave oven, dryer, or high pressure container.
9. Keep away from fire immediately when leakage or foul odor are detected.

- Do not use in a location where strong static electricity generates.
- If there is battery leakage, foul odor, heat generated, discolored or deformed, or in any way appears abnormal during use, recharging or storage, immediately remove it from the equipment or battery charger, and stop use.

**CAUTION**

- If liquid leaking from the battery gets into your eyes, do not rub your eyes and wash them well with fresh clean water such as tap water and contact a doctor immediately. If left untreated, the liquid may cause eye-problems.

**SPECIFICATIONS**

**POWER TOOL**

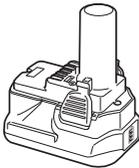
|                             | Specifications for standard torque          | Specifications for low torque |
|-----------------------------|---|-------------------------------|
| No-load speed               | 0 – 2300 / min                              | 0 – 2000 / min                |
| Capacity (Ordinary bolt)    | M5 – M12                                    |                               |
| Tightening torque (Maximum) | 110 N·m                                     | 65 N·m                        |
| Rechargeable battery        | BCL1030A: Li-ion DC 10.8 V (3.0 Ah 6 cells) |                               |
| Weight                      | 1.2 kg                                      |                               |

**CHARGER**

|                  |         |
|------------------|---------|
| Model            | UC10SFL |
| Charging voltage | 10.8 V  |
| Weight           | 0.35 kg |

**OPTIONAL ACCESSORIES (sold separately)**

- Battery (BCL1030A)



Optional accessories are subject to change without notice.

**APPLICATIONS**

- Driving and removing of machine screws, wood screws, tapping screws, etc.

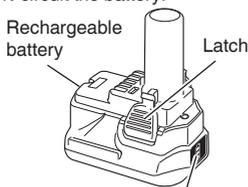
**BATTERY REMOVAL/INSTALLATION**

**1. Battery removal**

Hold the handle tightly and push the battery latch to remove the battery (see **Figs. 1 and 2**).

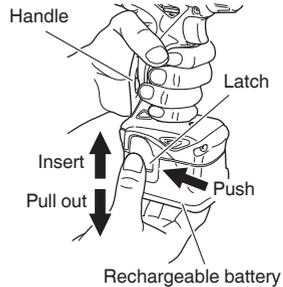
**CAUTION**

Never short-circuit the battery.



**Fig. 1**

- If liquid leaks onto your skin or clothes, wash well with clean water such as tap water immediately. There is a possibility that this can cause skin irritation.
- If you find rust, foul odor, overheating, discolor, deformation, and/or other irregularities when using the battery for the first time, do not use and return it to your supplier or vendor.



**Fig. 2**

**2. Battery installation**

Insert the battery while observing its polarities (see **Fig. 2**).

**CHARGING**

**NOTE**

The charger is an optional accessory that is sold separately.

Before using the power tool, charge the battery as follows.

- Connect the charger power cord to the receptacle**  
When connecting the plug of the charger to a receptacle, the pilot lamp will blink in red (At 1-second intervals).
- Insert the battery into the charger**  
Firmly insert the battery into the charger till it contacts the bottom of the charger as shown in **Fig. 3**.



## CAUTION

- If the battery is charged while it is heated because it has been left for a long time in a location subject to direct sunlight or because the battery has just been used, the pilot lamp of the charger lights for 1 second, does not light for 0.5 seconds (off for 0.5 seconds). In such a case, first let the battery cool, then start charging.
- When the pilot lamp flickers (at 0.2-second intervals), check for and take out any foreign objects in the charger's battery connector. If there are no foreign objects, it is probable that the battery or charger is malfunctioning. Take it to your authorized Service Center.
- Since the built-in microcomputer takes about 3 seconds to confirm that the battery being charged with UC10SFL is taken out, wait for a minimum of 3 seconds before reinserting it to continue charging. If the battery is reinserted within 3 seconds, the battery may not be properly charged.

## PRIOR TO OPERATION

### 1. Setting up and checking the work environment

Check if the work environment is suitable by the above precautions.

## HOW TO USE

### 1. Installing the bit

#### NOTE

The bit is an optional accessory that is sold separately. Always follow the following procedure to install driver bit. (Fig. 4)

- (1) Pull the guide sleeve forward.
- (2) Insert the bit into the hexagonal hole in the socket.
- (3) Release the guide sleeve and it returns to its original position.

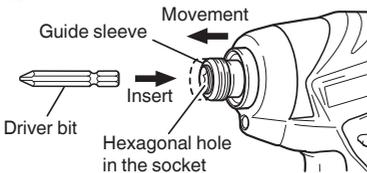


Fig. 4

#### CAUTION

If the guide sleeve does not return to its original position, then the bit is not installed properly.

### 2. Removing the bit

Please do the opposite point on the method of installing bit.

### 3. Confirm that the battery is mounted correctly

### 4. Check the rotational direction

The bit rotates clockwise (viewed from the rear side) by pushing the R-side of the selector button.

The L-side of the selector button is pushed to turn the bit counterclockwise (See Fig. 5) (The (L) and (R) marks are provided on the body).

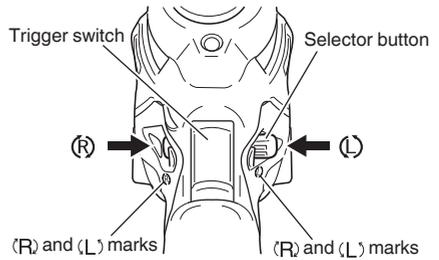


Fig. 5

### 5. Switch operation

- When the trigger switch is depressed, the tool rotates. When the trigger is released, the tool stops.
- The rotational speed of the drill can be controlled by varying the amount that the trigger switch is pulled. Speed is low when the trigger switch is pulled slightly and increases as the trigger switch is pulled more.

#### NOTE

A buzzing noise is produced when the motor is about to rotate. This is only a noise, not a machine failure.

### 6. Using the light

Pull the trigger switch to light up the light. The light keeps on lighting while the trigger switch is being pulled. The light goes out after releasing the trigger switch. (Fig. 6)

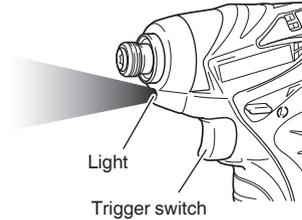


Fig. 6

#### CAUTION

Do not look directly into the light. Such actions could result in eye injury.

### 7. Tightening and loosening screws

Install the bit that matches the screw, line up the bit in the grooves of the head of the screw, then tighten it.

Push the impact driver just enough to keep the bit fitting the head of the screw.

#### CAUTION

Applying the impact driver for too long tightens the screw too much and can break it.

Tightening a screw with the impact driver at an angle to that screw can damage the head of the screw and the proper force will not be transmitted to the screw.

Tighten with this impact driver lined up straight with the screw.

## 8. Remaining battery indication

### [Meaning of indication]

Indicator lamp : Light OFF : Lights or blinks in green

| Status                       | Output stop   |   | Output possible   |   |  |
|------------------------------|---|---|---|---|--|
|                              | 0% – 10%  | 10% – 30%   | 30% – 50%   | 50% – 75%   | 75% – 100%   |
| Remaining battery level      |  |  |  |  |  |
| Remaining battery indication |  |  |  |  |  |

- In charging: The number of blinking indicator lamps increases to indicate the charge level of the battery.
- Pause: The indicator lamps blink continuously to indicate the remaining charge of the battery.
- Power tool in use: When the switch of the cordless power tool is turned on, the indicator lamps light to indicate the remaining charge of the battery. About 3 seconds after the switch is released, the indicator lamps begin to blink (status in pause).
- Auto-stop activated: Only the top indicator lamp blinks rapidly (every 0.5 second) and stops output.

### Auto-stop function

To prevent operation with a weakened power tool, this battery has an auto-stop function to stop output when the remaining battery level becomes 30% or less.

When the auto-stop function is activated, only the top indicator lamp blinks rapidly. Then please charge the battery immediately.

### Indication of abnormality

When the remaining battery indicator lamps of the battery blink rapidly (every 0.5 second), the battery may have a fault. Please bring it back to your dealer or the HiKOKI Authorized Service Center.

### NOTE

If the battery has not been used for a long time, it may take longer to charge it because of self-discharge.

### Operation in a low temperature environment (less than 0°C)

When BCL1030A is used in a low temperature environment, the motor may stop even if the remaining battery level is high enough. This is just a temporary phenomenon. The battery can be used as usual when warmed up.

## OPERATIONAL CAUTIONS

### 1. Resting the unit after continuous work

After use for continuous bolt-tightening work, rest the unit for 15 minutes or so when replacing the battery. The temperature of the motor, switch, etc., will rise if the work is started again immediately after battery replacement, eventually resulting in burnout.

### NOTE

Do not touch the metal parts, as it gets very hot during continuous work.

### 2. Cautions on use of the speed control switch

This switch has a built-in, electronic circuit which steplessly varies the rotation speed. Consequently, when the switch trigger is pulled only slightly (low speed rotation) and the motor is stopped while continuously driving in screws, the components of the electronic circuit parts may overheat and be damaged.

### 3. Use a tightening time suitable for the screw

The appropriate torque for a screw differs according to the material and size of the screw, and the material being screwed etc., so please use a tightening time suitable for the screw. In particular, if a long tightening time is used in the case of screws smaller than M8, there is a danger of the screw breaking, so please confirm the tightening time and the tightening torque beforehand.

### 4. Work at a tightening torque suitable for the bolt under impact

The optimum tightening torque for nuts or bolts differs with material and size of the nuts or bolts. An excessively large tightening torque for a small bolt may stretch or break the bolt. The tightening torque increases in proportion to the operation time. Use the correct operating time for the bolt.

### 5. Confirm the tightening torque

The following factors contribute to a reduction of the tightening torque. So confirm the actual tightening torque needed by screwing up some bolts before the job with a hand torque wrench. Factors affecting the tightening torque are as follows.

- (1) Voltage  
When the discharge margin is reached, voltage decreases and tightening torque is lowered.
- (2) Operating time  
The tightening torque increases when the operating time increases. But the tightening torque does not increase above a certain value even if the tool is driven for a long time.
- (3) Diameter of bolt  
The tightening torque differs with the diameter of the bolt. Generally a larger diameter bolt requires larger tightening torque.
- (4) Tightening conditions  
The tightening torque differs according to the torque ratio; class, and length of bolts even when bolts with the same size threads are used. The tightening torque also differs according to the condition of the surface of workpiece through which the bolts are to be tightened. When the bolt and nut turn together, torque is greatly reduced.

## MAINTENANCE AND INSPECTION

### 1. Inspecting the driver bit

Using a broken bit or one with a worn out tip is dangerous because the bit can slip. Replace it.

### 2. Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.

### 3. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool.

Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

### 4. Inspecting the carbon brushes (Fig. 7)

The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush can result in motor trouble, replace the carbon brush with new ones when it becomes worn to or near the "wear limit". In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

#### NOTE

When replacing the carbon brush with a new one, be sure to use the HiKOKI Carbon Brush Code No. 999054.

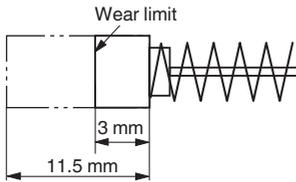


Fig. 7

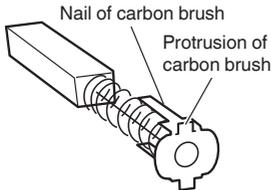


Fig. 8

### 5. Replacing carbon brushes

Take out the carbon brush by first removing the brush cap and then hooking the protrusion of the carbon brush with a slotted head screw driver, etc., as shown in Fig. 9. When installing the carbon brush, choose the direction so that the nail of the carbon brush agrees with the contact portion outside the brush tube. Then push it in with a finger as illustrated in Fig. 10. Lastly, install the brush cap.

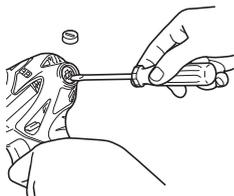


Fig. 9

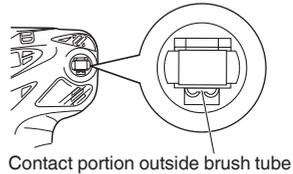


Fig. 10

#### CAUTION

Be absolutely sure to insert the nail of the carbon brush into the contact portion outside the brush tube. (You can insert whichever one of the two nails provided.)

Caution must be exercised since any error in this operation can result in the deformed nail of the carbon brush and may cause motor trouble at an early stage.

### 6. Cleaning of the outside

When the impact driver is stained, wipe with a soft dry cloth or a cloth moistened with soapy water. Do not use chloric solvents, gasoline or paint thinner, for they melt plastics.

### 7. Storage

Store the impact driver in a place in which the temperature is less than 40°C and out of reach of children.

#### NOTE

Make sure that the battery is fully charged when stored for a long period (3 months or more). The battery with smaller capacity may not be able to be charged when used, if stored for a long period.

### 8. Service parts list

A : Item No.  
B : Code No.  
C : No. Used  
D : Remarks

#### CAUTION

Repair, modification and inspection of HiKOKI Power Tools must be carried out by a HiKOKI Authorized Service Center.

This Parts List will be helpful if presented with the tool to the HiKOKI Authorized Service Center when requesting repair or other maintenance.

In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.

#### MODIFICATIONS

HiKOKI Power Tools are constantly being improved and modified to incorporate the latest technological advancements.

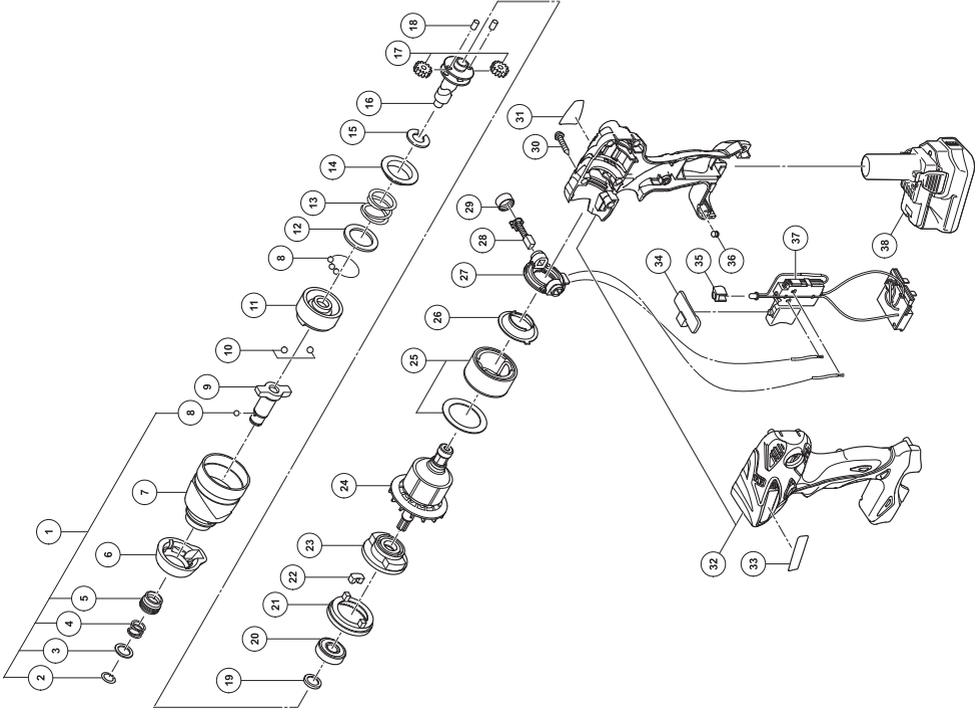
Accordingly, some parts (i.e. code numbers and/or design) may be changed without prior notice.

#### Important notice on the batteries for the HiKOKI cordless power tools

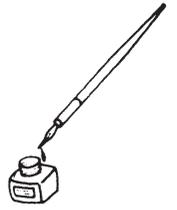
Please always use one of our designated genuine batteries. We cannot guarantee the safety and performance of our cordless power tool when used with batteries other than these designated by us, or when the battery is disassembled and modified (such as disassembly and replacement of cells or other internal parts).

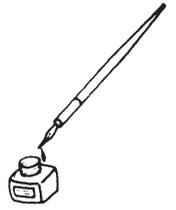
#### NOTE

Due to HiKOKI's continuing program of research and development, the specifications herein are subject to change without prior notice.



| A  | B      | C  | D                                  |
|----|--------|----|------------------------------------|
| 1  | 329538 | 1  | "2-5, 8"                           |
| 2  | 995933 | 1  |                                    |
| 3  | 322739 | 1  |                                    |
| 4  | 322737 | 1  |                                    |
| 5  | 329537 | 1  |                                    |
| 6  | 329535 | 1  |                                    |
| 7  | 331861 | 1  |                                    |
| 8  | 959148 | 29 | D3.175                             |
| 9  | 329554 | 1  |                                    |
| 10 | 959154 | 2  | D5.556                             |
| 11 | 334122 | 1  |                                    |
| 12 | 315978 | 1  |                                    |
| 13 | 334123 | 1  |                                    |
| 14 | 316172 | 1  |                                    |
| 15 | 322740 | 1  |                                    |
| 16 | 329541 | 1  |                                    |
| 17 | 318444 | 2  |                                    |
| 18 | 324234 | 2  |                                    |
| 19 | 319911 | 1  |                                    |
| 20 | 6901VV | 1  | 6901VVCMP52L                       |
| 21 | 331858 | 1  |                                    |
| 22 | 329517 | 2  |                                    |
| 23 | 329545 | 1  |                                    |
| 24 | 360842 | 1  | Specifications for standard torque |
| 24 | 360752 | 1  | Specifications for low torque      |
| 25 | 329588 | 1  |                                    |
| 26 | 329546 | 1  |                                    |
| 27 | 329547 | 1  |                                    |
| 28 | 999054 | 2  |                                    |
| 29 | 319918 | 2  |                                    |
| 30 | 313687 | 9  | D3x16                              |
| 31 |        | 1  |                                    |
| 32 | 329587 | 1  | Specifications for standard torque |
| 32 | 329590 | 1  | Specifications for low torque      |
| 33 |        | 1  |                                    |
| 34 | 329548 | 1  |                                    |
| 35 | 329552 | 1  |                                    |
| 36 |        | 1  |                                    |
| 37 | 330963 | 1  |                                    |
| 38 | 334305 | 2  | BCL1030A                           |





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